

Abstract

A high density, optical fiber array includes etched silicon front and guide masks anodically bonded to high temperature glass die plate and/or spacer. Optical fibers secured in the front plate holes have the same thermal expansion coefficient as the masks and die/spacer plates to reduce the need for certain epoxy interplate zones which would have a different thermal expansion coefficient. Methods and a system for making the mask/plate stack are also disclosed along with various plate stacking arrangements and the front plate anodically bonded to a glass lens array.